

CLAIMS

1. A device for conveying a liquid including at least one of dispensing and aspirating the liquid comprising:

a controlling device adapted to convey the liquid;

a motor drive for operating the controlling device;

control electronics for controlling the motor drive and for setting at least one process interval (t_p) for a plurality of process steps to be carried out in succession;

a manually actuatable actuating element connected to the control electronics to allow actuation of the control electronics to convey the liquid; and

a programming element for programming the control electronics to adjust control of the motor drive to thereby adjust the quantity of liquid conveyed upon actuation of the actuating element ;

wherein a first type of actuation of the actuating element manually triggers an individual process step, and a second type of actuation of the actuating element automatically causes automatic repeated successive triggering of process steps, each in the process interval (t_p); and

wherein the process interval (t_p) is determined by the control electronics by analyzing at least one interval occurring between manual actuation of the actuating element .

2. The device according to claim 1, wherein the device is a repeating pipette of a pipette system with a syringe interchangeably mounted thereon, the repeating pipette being at least one of a positive displacement and an air displacement type.

3. The device according to claim 1, wherein the device is a metering device of a metering system with a metering liquid storage container, the metering device being at least one of a positive displacement and an air displacement type.

4. The device according to claim 1, wherein interval from last manual individual triggering before start of automatic triggering is set as the process interval (t_p) by the control electronics .

5. The device according to claim 1, wherein an average of last n intervals ($n > 1$) from manual individual triggering before start of automatic triggering is set as the process interval (t_p) by the control electronics .

6. The device according to claim 5, wherein the last n intervals of manual individual triggerings are weighted.
7. The device according to claim 1, wherein an average of a plurality of manual individual triggerings before the start of automatic triggering is determined by the control electronics based on a statistical method of analysis.
8. The device according to claim 7, wherein the control electronics includes a filter for eliminating at least one of atypically large and atypically small intervals.
9. The device according to claim 1, wherein the process interval (t_p) is stored in the control electronics and is active on renewed actuation of the actuating element until the process interval is at least one of actively deleted and the device is turned off.
10. The device according to claim 9, wherein the stored process interval (t_p) is actively deleted by at least one of actuation of the programming element and renewed multiple manual individual triggerings.
11. The device according to claim 1, wherein the stored process interval (t_p) is actively deleted by at least one of actuation of the programming element and renewed multiple manual individual triggerings.
12. The device according to claim 1, wherein the process interval (t_p) set by the control electronics is shorter than the process interval (t_p) determined by the control electronics from the preceding manual individual triggerings.
13. The device according to claim 12, wherein the process interval (t_p) determined by the control electronics from the preceding manual individual triggerings is corrected using a correction factor to the process interval (t_p) stored by the control electronics.
14. The device according to claim 1, wherein during the second type of actuation, the control electronics also detects cycle of movement of the device between the triggering operations and uses the cycle of movement to correct the process interval (t_p).

15. The device according to claim 14, wherein the control electronics includes a sensor adapted to sense movement of the device between the triggering operations.

16. The device according to claim 1, wherein the first type of actuation of the actuating element is a short-term actuation, and the second type is a continuous actuation.

17. The device according to claim 1, wherein the actuating element is actuated by depressing an actuating key.

18. The device according to claim 16, wherein the actuating element is actuated by depressing an actuating key.

19. The device according to claim 17, wherein the actuating element is actuated by releasing an actuating key that has previously been depressed.

20. The device according claim 1, wherein the actuating element is a double element having a first element for individual triggering and a second element for automatic triggering.

21. The device according claim 17, wherein the actuating element is a double element having a first element for individual triggering and a second element for automatic triggering.

22. The device according to claim 1, wherein the actuating element is actuated once for single actuation and double actuated for continuous actuation.

23. The device according to claim 1, wherein the actuating element is an electronic element.

24. The device according to claim 23, wherein the actuating element is an optoelectronic element.

25. The device according to claim 24, wherein the actuating element includes at least one of a photoelectric barrier element and a light reflection element.

26. The device according to claim 23, wherein the actuating element is a proximity-type element.